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Journal of the Society of Arts.

FRIDAY, FEBRUARY 6, 1863.

SOCIETY'S MEMORIAL OF THE PRINCE CONSORT.

The Council hereby convene a General Meeting of the Members of this Society, to be held on Saturday, the 7th February, at 2 o'clock, p.m., to receive a Report from the Council in reference to the intended Memorial of the Prince Consort for the Society.

By Order of the Council,

P. LE NEVE FOSTER, Secretary.

28th January, 1863.

NOTICE TO MEMBERS.

The following circular has been sent to each member of the Society :—

Society of Arts, Manufactures, and Commerce,
John-street, Adelphi, London, W.C., 30th January, 1863.
SIR,—In preparing the lists of members from which Committees of Reference are to be appointed by the Council, in conformity with the 36th bye-law, the Council desire to avail themselves, in the fullest and most useful manner, of the varied information and practical experience of all the members of the Society who may be willing to promote its objects by serving on such Committees.

To this end the Council propose to frame the lists under the nine general heads undermentioned; and they will be much obliged to you if you will inform me, on or before Monday, the 9th of February next, on which list, if any, you are willing that your name should be placed, and if you will specify any subject or subjects, in which you take a particular interest, capable of being properly included under the general head selected by you.

In the event of your not wishing your name to be placed on any of the lists, no reply is expected to this letter.

I am, Sir, your obedient servant,

P. LE NEVE FOSTER, Secretary.

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| I. Fine Art. | VI. Commerce. |
| II. Agriculture. | VII. Colonies. |
| III. Chemistry. | VIII. Education. |
| IV. Manufactures. | IX. Economic and Sanitary Science. |
| V. Mechanics and Engineering. | |

NOTICE TO INSTITUTIONS AND LOCAL BOARDS.

A copy of a speech delivered by Mr. Harry Chester, Vice-President of the Society of Arts, and Chairman of the Committee of the Metropolitan Association for Promoting the Education of Adults, entitled "Education and Advancement for the Working Classes," will be forwarded to each Institution and Local Board.

NINTH ORDINARY MEETING.

WEDNESDAY, FEBRUARY 4, 1863.

The Ninth Ordinary Meeting of the One Hundred and Ninth Session was held on Wednesday, the 4th inst., Edwin Chadwick, Esq., C.B., in the chair.

The following candidates were proposed for election as members of the Society :—

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| Castriota, H.R.H. Prince Georges, Skanderbeg des Rois d'Epire et d'Albanie | 3A, King-st., St. James's, S.W. |
| Chatfield, Charles | Broad Green House, Croydon, S. |
| Ferguson, James | Bridge-street, Inverness, N.B. |
| Machaffie, David | (Messrs. John Pender and Co.), Manchester. |
| McKay, Dr., M.D. | Castle-street, Inverness, N.B. |
| Pigott, Wm. Peter | 16, Argyll-st., Regent-st., W. |
| Pouncey, John | Dorchester. |
| Rae, John, M.D. | 21, Brompton-square, S.W., & 4, Fenchurch street, E.C. |
| Ritchie, W. | 16, Hill-street, Edinburgh. |
| Rowland, John A. | Belmont, Upper Norwood, S. |
| White, William | 2, Waterloo-place, S.W., and Forest-hill, Sydenham, S.E. |

The following Candidates were balloted for and duly elected members of the Society :—

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| Browne, William, jun. | Patent Rope Works, Wivenhoe, Colchester. |
| Collyer, Charles Edwards | 150, Fenchurch-street, E.C. |
| Dawbarn, Richard Wood | Wisbech. |
| Merry, William L. | 13, Pembroke-place, Bayswater, W. |
| Rivett, Joseph Adric | Prestoln, near Bolton, Manchester. |
| Willis, James | 42, Little Britain, E.C. |

The Paper read was—

ON THE COOKING DEPOTS FOR THE WORKING CLASSES, RECENTLY ESTABLISHED ON THE SELF-SUPPORTING PRINCIPLE AT GLASGOW AND MANCHESTER, WITH SUGGESTIONS FOR INTRODUCING THEM IN THE METROPOLIS.

By ALEXANDER BURRELL, F.S.A.

Six weeks ago, one of your Vice-Presidents, Mr. Winkworth, called my attention to the account in your *Journal* of a paper read by Mr. Taylor, in this room, on "Dwelling Houses for the Working Classes," and of the very interesting and instructive discussion which ensued on it. I had at the time just returned from Glasgow, where I had visited and inspected the "Cooking depôts for the working classes," which, having during the last two years been established there, had risen from very slight to very large dimensions, and, in connection with the existing Lancashire distress, had deservedly attracted the attention of the public as a most successful experiment, affording to the working classes an abundance of cheap and well-cooked food, as a *bonâ fide* mercantile question of profit and loss, in a way by which working men could avail themselves of the food so produced without accepting charitable assistance, thus preserving that feeling which to them ought to be, and to a large extent is, as dear as to any other portion of the community, while its existence is the best guarantee of the soundness of their principles, and of the security of all other classes in the country. I suggested to Mr. Winkworth that a description of the *modus operandi* of these institutions would be an appropriate sequel to Mr. Taylor's paper, inasmuch as perhaps of equal, if not superior, importance to the comfortable and respectable housing of the working classes is the affording them an abundant supply of good and well cooked food. I added, that having taken full notes of the statistics, &c., of the Glasgow depôts during my visit, and having access to further materials if required, I would be glad, provided your Council were prepared to accept such a proposal, to be of service to any member of the Society disposed to read a paper of the kind, by giving him my notes and affording him any other assistance in my power.

The result, however, was, that I was most unexpectedly invited to prepare and read the paper myself. After some consideration I expressed my willingness to do so, and immediately collected the necessary facts, visited Manchester, where several establishments of the kind had been more recently set a-going, and prepared my paper to be read at your meeting of 21st January. To suit the convenience of a gentleman who had engaged to read another paper, but who was to leave England at the end of January, I agreed to postpone mine till this evening. During the interval a series of most important and admirable articles descriptive of the Glasgow scheme have appeared in the press. First, an article in "Good Words," which, going over the same ground, rendered it necessary for me to surrender a considerable part of my statistics, &c. Then on Thursday last, there appeared simultaneously in the *Times* and *Cornhill Magazine* for February, published that day, articles on the subject which not only far excelled anything that I could pretend to produce, but, dealing with the very same facts and figures, have so familiarised the public with what I had to explain, that I was again forestalled. I have endeavoured however, by recasting my paper, to avoid laying before you stale information in a style infinitely below that in which it had been treated in the distinguished organs of public opinion to which I have referred.

I have to crave your indulgence for making these personal explanations. I have ventured to trouble you with them for two reasons—first, to explain how it was that I came to undertake such a task; and, second, to deprecate any severe criticism of the style and form of my paper, in the special and unfavourable circumstances in which I have been called on to draw it up. One effect, however, of this predicament, and which after all may be in my favour, is, that I have neither the inclination nor the temptation of indulging in the rhetoric or sentimentalities of the subject, and that I am in a measure forced to confine myself to its practical bearings and details, and to submit to you illustrations of the actual working of the system.

The merit of practically carrying out the scheme in question is due to Mr. Thomas Corbett, of Glasgow, a gentleman very well known in the west of Scotland, not only for his great sagacity and energy as a man of business and as a most successful merchant, but also as one of that large and invaluable class of our practical men who, amid the incessant toils and cares of business, can still afford time and thought, as well as large pecuniary assistance, to any cause having the welfare and improvement of their fellow men in view. It is nothing new to myself, or others acquainted with Glasgow during the last fifteen years, to be told of Mr. Corbett's efforts in various objects of philanthropic interest. Though his success in the present undertaking has been signal, speedy, and certain, that may be attributed to the large experience, and, I may add, to the wisdom taught by previous failures and disappointments in similar philanthropic objects. I mention this in order to draw the practical conclusion that it is not by any sudden stroke that such an effort is at once successful, that the principle is not enough, but requires the man to work it out, and that the man must be possessed of the qualities of experience, judgment, and prudence, to make the project successful. I may be permitted also to add, what is well known in his own district, that much of that success is due to the warm and active sympathies and co-operation of his esteemed wife in all his philanthropic labours, a fact which Mr. Corbett will be the first to acknowledge.

In a communication with which Mr. Corbett has favoured me, he states that the idea of providing better, and at the same time cheaper, food for the working classes by the establishment of a central cooking depôt, first occurred to him from reading an article in the *Cornhill Magazine* of June, 1860, under the title of "The Poor Man's Kitchen." Many of you may have read that article at the time, but I shall quote a few sentences from it for the

purpose of shewing you the appeal which the writer made, and how completely Mr. Corbett has responded to it.

After treating of a subject which has again come up before public attention, viz., the relative superiority of the diet afforded to prisoners in the public prisons to that enjoyed by the working classes, showing that it is not so much owing to superior food but good cooking, the writer draws these conclusions:—"That prisoners are well fed, that the diet provided is beyond the means of many poor families, and that there must be something wrong if criminals are so much better off than the honest artisan, who is starving with his family on a pittance of 20s. a week. That there is something wrong it is not necessary to deny. But the question may be raised, whether the wrong lies in our system of prison discipline? If the fare which is provided for our criminals is good and ample, is even generous, there is this also to be remembered, at the same time, that it is dirt cheap. It is so cheap that when the cost of it is mentioned everybody will at once admit that the idea of lowering the price still further would be a ridiculous meanness. At the Clerkenwell House of Correction the diet which we have described is provided to each prisoner at the cost of certainly not more than 4d. a day. The average cost of feeding all the prisoners in that gaol during the year 1859 was 2s. a week for each man; but as this average is struck so as to include the second and third class prisoners, there will be a difference in the calculation if we take account only of the first-class prisoners receiving first-class fare. That difference, however, must be very slight, as among the 1,200 daily inmates of the prison there is but a sprinkling of the second and third-class criminals. We are clearly within the mark if we put down 4d. a day for each man. At the Ely House of Correction the charge is 3½d. for each. At the Salford New Bailey the daily cost of food is 2½d. a head. For the whole of England the average cost of each prisoner's diet is 3½d. a day.

"What is the inference to be deduced from such a fact? Will anybody say that our prisoners are extravagantly fed? It is surely palpable that in a comparison with the diet of prisoners, the fare of our honest poor looks meagre enough; that if a premium seems to be placed on crime by the goodness of the penitentiary kitchen, there may be a wrong somewhere; but it is certainly not in the system of prison discipline. Surely the *wrong* is not that prisoners are so well fed, but that honest men are worse fed. Why should they be worse fed? They pay far more than fourpence a day for their food, and that food is not nearly so nice, nor so wholesome, as that which every pickpocket obtains. The proper inference is that in prisons these things are managed well, while in the poor man's dwelling they are managed badly. It is entirely an affair of management.

"There are two great losses which the poor man suffers from. In the first place he has to buy from the retail dealer, and consequently pays more for every article that he requires. He has to pay so much indeed for each item, that a number of little delicacies, which he has to buy fresh every day in order to give a flavour to his food, such as parsley, cost him far more than they are worth—cost, it may be, two or three hundred per cent. beyond their real value. In the second place, after he has got all his articles of food together, there is a great deal of waste, because things are prepared on a small scale. He will buy bone with his meat, but he is unable to turn the bone to account; or he gets too much fat with his meat, and he has either to cut it off or to throw it into the pot, so as to spoil the dinner. Besides which, in nine cases out of ten, his wife is a vile cook, and would spoil the best of food. What with buying his things dear, buying what he cannot turn to any use, and having to trust to the tender mercies of those culinary artists who are said to be chiefly provided by the enemy of mankind, the working man's teeth enjoy but poor practice. The remedy for the startling contrast between the dinner tables of the thief in prison and

honesty in a garret, is not to place the felon on shorter commons, but to teach honesty the art of combination, and to bring that system of the division of labour, which in manufactures has achieved the most splendid results, to bear upon the ordinary economy of human life.

"It is a very humiliating reflection that eating and drinking occupy more of our thoughts than anything else in heaven above or in the earth beneath. We are not yet as the lilies that take no thought of such matters. Man is like the lower animals in this respect, that with the vast majority of our race, the struggle for existence is a struggle for dinner. We have all somewhat of the Tartar Khan in us, and after we ourselves have dined, are ready to proclaim that the whole world may dine also. But we first. Nobody shall dine, with our good-will, if we are starving. Who can count all the wars, murders, and quarrels that have arisen out of this one question of dinner—the question of questions? How many of the piteous cases that come before Sir Cresswell Cresswell are to be explained by deficiency of food, badness of cooking, and fits of indigestion? There is no such visitant as hunger and deranged gastronomy. If we could only get at the wisdom which is supposed to lie in ancient fables, we should probably find that Pandora's box, the source of every mischief, was an empty oven or larder, or some such receptacle. The poor man especially feels the truth of this doctrine. He conspires against the rich because he never gets a dinner, and on that point he feels with the great Cham. He beats his wife because, with his hard won earnings, she can place only bad food before him. He drinks beer and drowns himself in gin, because no meat that he can get is half so pleasant. People imagine that by introducing the light wines of France into this country, we shall put a stop to drunkenness. It is a great mistake. The French are a sober people, not because they drink wine, but because they are good cooks. Where you have had cookery and good liquor, depend upon it the liquor will carry the day. And we shall not stop the rage for liquor in this country by making it still better, by turning the gin into Cognac, and by turning the beer into Bordeaux. The cure lies rather in restoring the balance between meat and drink. Put the meat on a par with the drink, and then see what the result will be. Either teach the poor man to cook, or give him his meat well cooked. Let the temperance leagues and alliances look to it; they will accomplish far more good by improving the working man's edibles than by meddling with his potables—by seconding that natural law which makes a man chiefly dependent on his food, rather than by attempting to place artificial barriers in the way of his getting whatever drink he may require. The best cure for the drunkenness of the lower classes is not a Maine Liquor Law, but soup and sausages, puddings and pies; is not to shut the beer-shops, but to open the 'POOR MAN'S KITCHEN.'"

Such was the appeal which arrested the attention of Mr. Corbett. Though he is not a teetotaler, yet, like all philanthropic men, he laments the prevalence of that sad habit of drunkenness which debases and destroys so many of our working classes. He had long joined in the efforts of the "Glasgow Abstinents' Union," a body of gentlemen who, while maintaining the strictest principles of their profession, have not only sought but obtained the pecuniary support of all classes in Glasgow, though not quite agreeing in the wisdom of total abstinence, and who, besides struggling for repressive measures against public-houses, have, by a well planned and energetically arranged system of cheap concerts, excursions, and amusements for the working classes of Glasgow, also done a very great work indeed in that city in rivalling the more dangerous attractions afforded by the public-house, the casino, and the dram-shop. Co-operating, therefore, with them, Mr. Corbett determined that his establishments should be practically non-intoxicating, thus in a double sense answering the challenge of the writer in "The Cornhill."

The first of Mr. Corbett's establishments was set a-going

on the 21st September, 1860, in a portion of the buildings of the Sailor's Home, on the Broomielaw of Glasgow, very much, as a locality, answering to the Wapping of London. There were two halls on one floor, taken at a rent of £100 a-year, and calculated to accommodate 100 persons at one time. Here the movement was initiated, and in a few days proved to be a complete and wonderful success. The rooms were comfortable, well lighted, warmed, and ventilated, kept scrupulously clean, provided with newspapers and magazines, and the uniform charge for any article of diet was one penny. It met "a felt want," and was instantly appreciated by the working classes. The success which attended it led Mr. Corbett to open a second branch a few weeks later, then another, and another—a new one every two months or so up to the present time, so that at this moment there are 13 in full operation capable of accommodating 3,000 persons at one time—employing a staff of 135 persons, consisting of one manager, one cashier, one inspector, three vanmen, and one kitchen-man, in all, seven males, with 128 females, including 13 matrons, one at each establishment, and 115 waitresses, paying an aggregate rent of £1,140 per annum, disposing of penny rations of all kinds to the enormous extent of 18,000 a day, involving a gross income of £10,000 a year, and, finally, frequented by no less than 8,500 persons on the average every working-day of the week. These establishments have been spread through the districts chiefly frequented by working men, two of them in premises formerly occupied as large whisky shops. I can best illustrate the localities by stating to a London audience that two have been planted in King-street and the Salt-market (the latter familiar to the readers of "Rob Roy"), districts answering to that of St. Giles's here; one each in the vicinities of the large engineering, chemical, and other public works at Washington-street, Stobcross-street, Cowcaddens, Port Dundas, and St. Rollox; one in the locality answering to King William-street in this City, viz., Jamaica-street, accommodating 600 persons at a time in three spacious halls, at a rent of £320 a year; one each in Trongate and Argyle-streets, and the Candle-riggs—the Strand, Fleet-street, and Farringdon-street, of Glasgow—and, finally, the youngest of them all in the High-street, near the University, where I have no doubt it will afford the utmost advantage to a class of men of whom Scotland may well be proud, and of which this rich country knows little; that large body of young men rising from the lowest classes, very often working at the loom, the bench, or the plough, during the summer months, yet possessed of that stern habit of economy and resolute determination to rise in the world which I may fairly claim as characteristic of my countrymen, literally saving from the very sweat of their brows the means of obtaining a university education during the winter months. Perhaps there are some now listening to me, who, like myself, with somewhat better means, but still like many of the middle classes in Scotland, pressed by the *res augusta domi*, remembering the short commons and indifferent comforts of our university life, will not fail to appreciate the advantages such an establishment will afford to the large majority of Scottish university students.

The branches have now become so numerous as to make it absolutely necessary that a large central store and model kitchen should be erected, and arrangements are in progress for supplying this want. At the foot of Pitt-street a store and kitchen are being built, the latter of which will, we believe, be the largest in the kingdom. It will cover 1,000 square yards of ground, and will be twenty feet high in the interior; and is to be fitted up with steam-cooking boilers, ten of which are in course of manufacture. By this accession it is expected that abundant facilities will be afforded for increasing the variety of the viands supplied, and so rendering the bill of fare more attractive. The addition of a store will enable larger purchases to be made at a time, and effect an economy in the prime cost of the articles. In the mean time, every effort is being made to purchase articles of the best

quality, and in the first markets; and as an instance of this we may mention that one of the three vans belonging to the depôts is despatched every morning at six o'clock to a place six miles out of the town, and returns in time for the breakfast with the entire produce of two dairies.

One important feature of the depôts is the supplying of soup tickets to philanthropic persons at a charge of one penny each, which tickets are given to the poor in lieu of money, and, on presenting them at any of the branches, a ration of soup or broth—to be taken away, however, not consumed on the premises—is supplied at certain hours; and Mr. Corbett is now issuing tickets by which soup and broth may be obtained at half-price after five o'clock. In these hard times it is gratifying to know that large numbers of the charity tickets are sold.

I will not fatigue you by repeating here the detailed statistics of the various establishments, already so fully given in the articles referred to, but to such of you as take an interest in this department of the subject, I may refer to the tables (see Appendix). It will be more to my purpose to lay before you now, on the very best authority, that of Mr. Corbett himself, a short account of the principles upon which he has proceeded. I have the satisfaction of announcing that this part of my paper has been revised by him, and may be taken as an authentic exposition of his ideas and practice in working out the scheme.

Mr. Corbett would desire to disclaim all credit for the discovery of any superior mode of cooking, as in point of fact, the same principles, as far as the production of food is concerned, have been followed out in every poor-law union and prison in the kingdom.

The only new principle in this movement is just the appliance of strict commercial principles in the supplying of wholesome food to the working classes.

It is matter of the simplest experiment that all the articles in the bill of fare of the Glasgow Cooking Depôts can be produced for about three farthings each, and it has been practically shown that if it is made a fixed principle to have these articles uniformly of the best quality, the demand will be so great that the margin of profit—say one farthing on each penny ration—will be found amply sufficient to make such institutions self-supporting.

For the guidance of persons willing to undertake the movement in London, Mr. Corbett considers it essential to keep in view the following principles:—

1. Every establishment or branch must be commodious, well lighted, heated, and ventilated, so as to be a successful competitor with the gin palaces or beer shops of the metropolis, avoiding premises where the apartments are numerous and small; the most suitable place being a large hall, which can be fitted up in the simplest manner.

2. It would be well to have such premises or hall ornamented in a cheap but attractive manner, with some interesting engravings, mirrors, &c., which would have the effect of elevating the working men's feelings, while his bodily wants were supplied. And it will be at once apparent that this trifling initiatory expense would not even in the slightest degree affect the remunerative character of the undertaking.

3. The articles of food provided must be few and simple, so as to avoid all waste which would arise from variety, and besides interfere with the simplicity of the arrangements, which is an essential element of success.

4. It must be laid down as a fixed principle that every article purchased shall be of the best quality, and it is pleasant to know that this has been found, by Mr. Corbett's experience, to be true economy, verifying the proverb, "that the dearest article is cheapest in the long run."

5. One of the great leading features of the movement ought to be to show working men how much comfort they can enjoy without intoxicating drinks of any kind, and it should therefore be made a distinctive principle of the movement that all such establishments be conducted on strictly temperance principles, which will be a

guarantee to everyone frequenting them of a propriety of conduct which could not be otherwise secured.

6. As it is evident that no such institutions can either be permanent or successful, or even truly useful without the vital principle of being thoroughly self-supporting, it ought to be made a rule to decline presents or gifts of any kind, or even patronage. These can be of no real or important service to the movement, while they infringe upon the independent character of the institution. So thoroughly is this maxim carried out in the Glasgow establishments, that no gift, even of literary publications, would be received; so that the working man may feel that his newspaper or magazine, as well as his bowl of soup, is included in his penny bill of fare. And in connection with this principle it should also be made a fixed rule that no servant connected with any of the establishments should receive, on any pretence, any gratuity or gift whatever, under pain of instant dismissal.

7. Finally, it has been found in working out this scheme that the more commodious and handsome the premises are, the more successful have they been, and if such a movement is commenced in London, it would be exceedingly desirable to have the various branches in the most leading thoroughfares, and, as before observed, to have them not only commodious but thoroughly lighted and ventilated; in short, to make them as regards locality, comfort, &c., equals or rivals of the London gin palaces.

I now come to explain the progress of the scheme in Manchester. The first establishment of the kind there was founded by Mr. John Pender, M.P. for Totness; it was opened on the 25th November last, in the lower portion of a large mill in South Junction-street, Albion-street, under the name of "The Gaythorn Working Men's Dining Rooms and Cooking Depôt." Three rooms on the ground floor are occupied, one as a large hall capable of accommodating at one time 300 persons, a second as the kitchen, stores, &c., and the third is occupied as a reading-room, furnished with daily and weekly papers, and other useful and entertaining periodicals, free to those who have used the dining-rooms. Attached to, but independent of the dining-rooms, is a charitable kitchen for dispensing free rations, called "The Finch-street Kitchen," to which Mr. Pender intends devoting the profits made in the former. At present the service staff consists of nine males, a superintendent, seven men, and a boy, and fourteen females, a matron, sub-matron, and twelve waitresses, the latter selected from factory workers out of employment.

The second in order of time was that opened on 3rd December last, by Mr. Hugh Birley, called "The Irwell Dining Hall," situated in New Bailey-street. These premises are very well adapted for the purpose; they were originally built for a concert-hall and dancing saloon, and had been for some time unoccupied. The principal room, used as the dining-hall, measures 47 feet by 37, and is 27 feet high. It is lighted from the roof by means of a large skylight, and at night by gas pendants also from the roof. It has been fitted up for the accommodation of 200 persons, a small compartment near the door being partitioned off for the accommodation of women. The kitchen adjoins the hall on the same floor, with room above for the female domestics, and the cellars, stores, &c., are in vaults beneath. Daily papers and other periodicals are placed on the tables for the use of the visitors. The staff consists of a manager, matron, and ten female waitresses, the latter selected from Mr. Birley's sewing school.

About the same time a third establishment was opened, called "The Heyrod-street Self-supporting Cooking Depôt," in a large building formerly occupied as "The People's Institute," well known in the days of the Chartist Movement as the favourite resort of Fergus O'Connor and his coadjutors, and latterly occupied as a Ragged School. This institution has been opened under the guarantee of a Committee consisting of Mr. H. B. Jackson, Canon Richson, Mr. James Chadwick, and Mr.

Richard Johnson, the latter acting as Secretary. The building has been divided into two rooms, one for men and another for women, and is calculated for the accommodation of 300 at a time.

The only other to which I shall advert in detail is that established by Mrs. Eason Wilkinson, at 18, Oxford-street, called "The Manchester Kitchen for the People," where there is accommodation for about 200 at a time. This lady includes in her scheme the training of girls in the arts of cooking and housekeeping.

All these have been set going on the Glasgow model, and are managed on the same principle of being self-supporting; but others of the kind, affording more or less of charitable assistance to the distressed operatives, have also been organised by benevolent ladies and gentlemen, among which I may particularise "The Ardwick Cooking Kitchen" of Miss Hilton, at Summer-place, Ardwick; "The Working Men's Dining and Coffee Rooms," Nelson-street, Angel-meadow, which my time will not permit me further to notice. Of the Manchester establishments it may, however, generally be said that all of them have adopted the *modus operandi* of Mr. Corbett, their managers or matrons having been instructed in the system at Glasgow, where Mr. Corbett's managers are always willing to receive and instruct anyone visiting his establishments.

Several objections have been stated to the working out of these principles, and it may be convenient, in order to elicit the state of opinion as regards them in the discussion which is to follow on the paper, that I should shortly indicate such of them as have come under my notice. The first of these objections to which I will advert is, that such institutions must tend to wean the working man from his home. I have not anywhere seen this argument better stated than in the *Standard* newspaper, which thus refers to it:—

"The associative principle is developing itself in so many forms that it cannot be long before we have it applied to 'The Cooking for the Million.' It is part of the common progress, and this not the less that it will be an improvement, not without some serious drawbacks. We may disguise it as we like, but it will be the Parisian *café* and the West-end club introduced into British humble life, and so far, will be another step to that annihilation of "home" to which so many influences seem to be carrying us. The attractions that tie the working man to the domestic centre are already by no means in excess; and they will hardly increase as new means are found out to furnish cheap and pleasant modes of spending his hours elsewhere. The ale-house, concert, and music and dancing saloons, and institutions of the like order, are already doing their work on our town populations; and when we shall have given them the cooking establishments which may supply excellent dinners at wholesale prices, we shall have completed all the arrangements to qualify a great part of the mothers of humble life to join in the lament of the Belgravian matrons, and express the discontent of an inevitable position by spasmodic agitations for some dubious rights of women. But the revolution is there, and we must meet it not the less that we can give it but a dubious welcome. The working men will have cookery, and will have it cheap, even should it happen that home prove exactly the place where they will be least likely to meet with it. In the present state of our society it is a satisfaction to which they have become entitled, and which the course of things tends to press on them; and that said, all the rest follows as a matter of course. They know too much to continue their present system of unsatisfactory food, dearly bought and badly cooked; and if they did not, there are too many active observers amongst us to look patiently on an annual waste by millions, exactly where no waste can be comfortably afforded."

Now here is an answer to the objection, which I quote from the *Glasgow Herald*, for the reason that it states the opinion, and has the sanction, of Mr. Corbett himself:—

"An idea is entertained by some people that the *dépôt* is calculated to supersede domestic cookery. The impression is quite erroneous. Mr. Corbett has satisfied himself, by the most thorough investigation, that any really thrifty, managing housewife can provide her husband and family with meals quite as good and at even less money. The cooking at the *dépôt* is quite plain and simple, and is attended to by persons no more experienced than a tradesman's wife is in the higher and more difficult departments of the culinary art. What they can do at the *dépôt* she can do at home, and at less cost; and if a man can have as good a dinner at home, and can dine there as conveniently, he will never hesitate for a moment between it and the *dépôt*. The careful housewife, therefore, need look with no jealous eye on the increasing popularity of the "Great Western;" it cannot, and does not, propose to compete with her. Its aim is to provide first-rate food at a low price to those who cannot get it elsewhere—for instance, to lads in lodgings, and to men and women working at a great distance from their homes. Of course, if a married man has to choose between a tough, tasteless bit of meat in a dirty home, and a nice plate of beef and potatoes in a comfortable room, he may prefer the latter; but the effect of this will be good. It will stimulate careless and slovenly women to keep their houses nice and clean, and prepare their meals with more regard to the human palate and human powers of mastication and digestion. If they do that, as they all can do if they please, they have nothing to fear from the innocent attractions of the cooking *dépôt*. It generally requires a good deal of dirt and discomfort to drive a working man from the place where he can eat his meals with the faces of his wife and children round him, and it is consoling to think that if they *are* driven from home, they can now go to the cooking *dépôt* instead of the public house."*

The next objection is that these establishments do not add a glass of good beer at a penny to the food rations. You have already heard how decided Mr. Corbett is on this subject. At his establishment, water is supplied at pleasure, and very good lemonade and soda water at one penny per bottle, costing him, I believe, 9d. a dozen, producing his full quota of profit of one farthing per article. As I prefer quoting the actual arguments, I now give the objection from the article in "Good Words," and the reply from the *Glasgow Herald*:—

"If Mr. Corbett," says the writer in "Good Words," "could enable the working man to wash down his dinner with an Imperial half-pint of beer for a penny, he would confer a real boon on his customers. In Scotland this is not so much required as in England, but in either country, if such a want could be satisfied in such a place, it would do away with all excuse for adjournment to the public-house, and in many ways would be a real benefit to the working people. The penny ration of beer, like the other penny rations, might be made the maximum supply, and if so, such places could never become the haunt of the drunken and improvident. On the contrary, the decent regularity of a clean, cheap, and comfortable dinner, accompanied by a half-pint of sound beer, might, in multitudes of cases, by making plain the use as distinguished from the abuse, beget temperate habits, and cause a wise discrimination which would be most beneficial to the working men of Great Britain."

"On the contrary," says the *Glasgow Herald*, "the absence of all intoxicating liquors is a marked feature in the *dépôt* scheme—a feature, we believe, as much valued by the working men who frequent them as approved by others. No doubt there are a few of them who would relish, and would be willing to pay for, a glass of ale or porter, but they feel that the exclusion of all intoxicants, while it removes the temptation to additiona

* It may be mentioned that, at the establishment in Heyrood-street, Ancoats, Manchester, the following notice appears on one of the bills:—"Cans, suitable for carrying soup, meat, and potatoes, will be supplied, on payment of a small charge, to those who may be desirous of taking their food home."

and really unnecessary expense, guarantees them from the possibility of being ever disturbed in any branch they may choose to go to by any outbursts of alcoholic excitement or uproar. To the absence of all liquors in these places we must, no doubt attribute very much the absence of all rudeness and disorder. At any rate, it is impossible to speak too highly of the exemplary conduct of those who frequent them. We have inspected several of the branches ourselves—at the thronged hours, too—and have on every occasion found the working men and lads behaving with the civility and decorum of gentlemen. Those who speak of the inherent rudeness of working men in Scotland, because they have been rudely jostled by great louts who have reeled from the tavern, should visit one of the branches of the Great Western Cooking Dépôt."

I shall now advert to what may be called the Tobacco Question. Mr. Corbett on the one hand, and Messrs. Birley and Pender on the other, differ, I believe, on this point. I shall illustrate it by reference first to the *Quarterly Review*, in the article which I have already quoted, and again by a quotation from "Good Words."

First, then for the *Quarterly Review* :—

"Another point, the mention of which may perhaps provoke a smile, but cannot be alighted with impunity, is, that full and complete toleration must be accorded to smoking. The pipe is deemed an indispensable comfort by many working men, and they are apt to remain deaf to every inducement so long as it is withheld. It is not, indeed, needful that more than one room should be set apart for the smokers, for there are those of their own class who object to tobacco. But accommodation of some sort must be provided for them or they will desert to the public-house to enjoy their pipes in peace. The truth is, restraint of every kind, beyond what is absolutely necessary for order and propriety, should be studiously avoided. The very name of 'free and easy' given to the social meeting in the tap-room, shows plainly enough what is supposed to be attractive by those whose livelihood depends on conciliating working men."

And then from the writer in "Good Words":—"It is well-known that the great working-day luxury of large numbers of our operatives is a smoke after meals. Those who move constantly amongst them know how intensely a 'blast of the pipe' is enjoyed in the interval between the close of the meal and the resumption of work. This almost universally felt want ought to be provided for. A well ventilated smoking-room, to which smokers could adjourn and enjoy the fragrant weed, would be a real improvement worthy the consideration of the proprietor, and most certainly worthy the attention of those who contemplate starting such establishments elsewhere. Smoking may be a weakness, a great injury to the health, and a great waste of money that might be better spent. The world, however, has decided otherwise. At present, tobacco smoking is a luxury as tyrannical almost as any natural want, and its comfortable enjoyment ought to be provided for."

I must confess that on the principle of taking the working man as he is, and looking to the general and everyday habit of smoking in all classes, I would be disposed to think that a means for indulging this habit ought to be afforded in all institutions of the kind, always provided that this should be done in such a way as not to interfere with the taste and comfort of those who have not a liking for the dear, dirty, delightful, and disgusting indulgence.

Lastly, I have now respectfully to offer suggestions for introducing in London establishments of the kind, with such modifications as may best suit the special circumstances of the metropolis.

It is desirable, in the first place, that immediate steps should be taken to set going a large cooking dépôt, in temporary premises, to afford a practical illustration of the Glasgow scheme. Several gentlemen have offered to provide funds for the purpose, and I have for some time been looking out for a proper place. We had

fixed on the Borough as a suitable locality, as being in a district where working men were very numerous, and where, owing to the present railway works connected with the London, Chatham, and Dover Railway, a large body of men are constantly at work at distances from their homes. It occurred to me that part of the extensive buildings of the southern wing of St. Thomas' Hospital, now vacant, would be admirably suited for the purpose. The large and spacious wards now empty in that building, with the excellent light and ventilation they possess, the facilities for cooking, &c., which could be had at so very little expense, and the admirable situation, all concur in pointing out this as one of the best temporary sites in London. The property is now advertised for sale in the spring—any fittings necessary for converting a portion of it into a cooking dépôt, could be put up and taken down in a few days, so that its interim occupation in this way need not interfere with the sale, and it could be vacated at the shortest notice. I made an application to Mr. Smiles, the Secretary of the South Eastern Railway, on the subject, but as his instructions were for a sale, he could not then entertain any other proposal. I trust, however, that if ever the idea is supported by the public generally, the Directors of the Railway would readily consent to give, for a moderate rent, such part of the premises as might be wanted for temporary occupation. If this could be attained, in the course of ten days (such is the state of forwardness of our plans and preparations), a central dépôt, on the Glasgow plan, could be in operation, showing the exact working of the system.

In the second place, however, as regards London, the enormous extent at once of the field to be occupied, and what I am sure is the general desire to help in the work, makes it desirable that the scheme should be established on a scale far exceeding anything of the kind hitherto attempted in any other locality, and I would suggest that a permanent establishment, worthy of this great metropolis, should be at once organised for that purpose.

1. A combined effort should at once be made to raise by subscription such a sum as will be sufficient to erect in some central and suitable locality a large hall capable of accommodating at least 1,000 persons, with the necessary cooking apparatus and appliances.

2. That it should be called "The London Model Self-supporting Cooking Dépôt for the Working Classes."

3. That there should be attached facilities for cooking not only the food that might be consumed on the premises, but as the demand springs up, for affording supplies to branch establishments within such a circuit as would ensure their delivery in proper condition.

4. That these branches should not do any cooking themselves, but be supplied from this central establishment with all the rations required by light spring vans employed for the purpose, and that they should be limited to reheating the food so supplied when necessary, except in the case of tea and coffee, which can be made on the premises. In this way a variety of small establishments, in suitable localities, in cheaply rented premises, could be spread over the metropolis, under charge of respectable females, who, being supplied with the rations, &c., at wholesale prices, might derive a profit by selling them in retail at the society's tariff, to which they should be bound to adhere, as well as to the rules generally of the central establishment, the whole subject to inspection by its officers; the fittings and furnishings to be supplied at cost price from the central dépôt, so as to ensure economy and a perfect uniformity of system. In this way the individual efforts of those disposed to aid in the movement, or even of persons in humble life willing to make a profit by it, could be made available, while the distinctive principles of the movement—the exclusion of the charitable element—would be secured, and the application of the rules of uniform, economic, and energetic management and superintendence, so essential to the successful working of the system, would be maintained.

5. The Central Hall should be fitted up and furnished with every possible convenience and improvement, so as to afford models in that respect to the branch establishments. To that end, improvements or inventions in any department of the actual details, would be invited and exhibited or tried, so as to afford a fair chance of their being adopted if at all likely to facilitate or improve the existing arrangements. In short, to make the central depôt the place where all the varied skill and ingenuity of our architects, sanitary reformers, mechanics, and artisans in the adaptation of the apparatus employed throughout the whole course of the food, from the raw material till it finds its way to the consumer, may be methodised and adopted if calculated to promote in any way the great object in view.

6. In fitting-up the Central Hall, provision should be made for converting it, on a short notice, for the evening, into a music or lecture hall, where cheap concerts, lectures, balls, and other gatherings for the cheap, innocent amusement of the working classes could be produced in the way which has, in the hands of the Glasgow Union, proved, as I have already mentioned, so successful in Glasgow as the means of rivalling the casinos, low music halls, and other questionable places of resort, and where working men, their wives and families, seeking to spend the evening in harmless enjoyment, might have the means of doing so apart from the temptation of drink and its debasing tendencies. I have not time to give details, or to do more than indicate the idea, but I cannot sit down without strongly urging upon all those about to take an interest in the proposed cooking depôts, to go a step further if possible, and, while supplying the working man with good and cheap food, to add to it such harmless amusements as will attract him to your institutions, so that when his appetite is satisfied, he may not be tempted to occupy his vacant hours in the evening at the "free-and-easies," and other places of a similarly debasing kind. On this subject I cannot close more appropriately than by quoting from an article on "Institutes for Working Men," in the current number of the *Quarterly Review*:—"We cannot get rid of the desire for recreation—woe to us if we could. It is to the mind what the free play of the limbs is to the body after constrained toil, and fits it for fresh use; and if there be any part of mankind who stand specially in need of it, surely it is the class whose day has been spent in the close air of the workshop or factory in constant and monotonous labour."

"Mr. Chadwick has shown," says Sir B. Brodie, in his 'Psychological Inquiries,' 'that many are driven to drinking gin as affording a temporary relief to the feelings of depression and exhaustion produced by living in a noxious atmosphere; and he gives instances of individuals who had spontaneously abandoned the habit when they were enabled to reside in a less crowded and more healthy locality, where they could breathe a purer air instead of loathsome exhalations. The case of such persons is analogous to that of others who become addicted to the use of opium, as the means of relief from bodily pain.'

"Now, what gin does physically, recreation, by virtue of the connection between soul and body, also does to a certain extent by raising the spirits, and thus reacting on the nervous sensibility. Legitimate amusement, therefore, both by occupying pleasantly time that might else be spent at the gin palace, and also by diminishing the craving for physical excitement, has a directly useful tendency as an antidote to the passion for alcohol.

"Among the means for refreshing our jaded spirits there is nothing more valuable than the enjoyment of wit and humour. These faculties have, beyond doubt, been implanted in us by the Author of our being for this end, and we are not to extirpate but to cultivate them. Yet, by an alliance with impure passions, these very faculties do often do their part to degrade rather than to benefit mankind, especially in those ranks of society where the secondary restraints by which good breed-

ing aids the cause of morals are less peremptory and efficient. What a noble object, then, it is for one who would be a benefactor of his kind to exhibit the powers of wit and humour in a pure form, and to prove the possibility of exercising them without sensuality or profaneness! The refining influence of intercourse between the different ranks of society could not be better shown than by such endeavours; and, lest any should slight the object as too humble or too easy, we may add that it is not one to be lightly achieved. It is not easy to make the distinction between, on the one hand, dealing in too subtle pleasantry for the appreciation of homely minds, and, on the other, degenerating into that which is coarse, and associated with images of an undesirable kind in the minds of the hearers. We believe, therefore, that those who take the truest and most enlarged views will be most ready to promote occasional lectures avowedly of an entertaining kind, and that those who can give such lectures with real success, will be useful labourers in the cause of social improvement.

"Passing from lectures to other appliances, we must not omit the mention of chess and draughts. Experience shows that these are much resorted to, and that they may be made to take the place of more questionable games. One writer urges, as a practical man, that at any rate a room should be specially set apart for chess and draughts; and we believe him to be right.

"But it is to music that we look for one of our strongest allies in improving the recreation of the working men. It is a pleasure which can be shared by their families, and one which is invariably popular. In some neighbourhoods the public-house, the small theatre, and the casino offer the only opportunities for its enjoyment. Not only, therefore, because it is in itself a valuable source of pure pleasure, but because it is now made to minister on a vast scale to temptation and vice, is it desirable to present it in an innocent form. What with learning and practising, and what with an occasional performance before friends and neighbours, it is surprising how much time may be spent in a harmless and pleasurable way through a taste for music. Accordingly, singing-classes, and classes for instrumental music, are strongly insisted upon by all who have much experience of the pursuits of English mechanics; and when some proficiency has been attained, an amateur concert makes an agreeable variety in the conduct of an institution, serves to advertise its advantages to the neighbourhood, and enables its musical members to show their skill to their friends and acquaintance."

APPENDIX.

GLASGOW COOKING DEPÔTS.—JANUARY, 1863.

BRANCHES.	ACCOMMODATION.		Rent.	Staff.
	Premises.	Persons.		
1. Broomielaw	Two large halls, including kitchen.....	100	100	26
2. Clyde-place	Ditto.....	300	90	7
3. King-street	Large hall	100	60	3
4. Saltmarket	Two rooms	80	20	2
5. Irongate	Two large halls and several rooms	500	165	20
6. Argyll-street.....	Two halls and females' room.....	250	80	6
7. Candleriggs	One hall and room	150	25	4
8. JAMAICA STREET ..	Three large halls and females' room	600	320	36
9. Washington-street..	Two large halls, &c....	200	80	6
10. Stopcross-street.....	Three rooms	70	30	2
11. Curcaddens.....	One large hall, and females' room	200	60	4
12. Port Dundas	Hall and several boxes.	150	35	3
13. N. Rollex l.....	One large hall and do.	150	35	3
14. High-street	One do. do.	150	40	3
		3,000	1,140	125

STATEMENT FOR DECEMBER, 1862. — GLASGOW COOKING

	Depôts.	Quantities.	Rations.	
1. Scotch broth	6,643½	gallons.	39,861	} 1 pint.
2. Soup	5,645½	"	33,873	
	12,289		73,734	
3. Beef { for soup ...	4,460	lbs.		} 2 oz.
{ boiled.....	4,936½	"	39,492	
{ collops ...	8,402	"	67,216	
	17,798½		106,708	
4. Bread { Loaves ...	9,760	No.	78,000	} 4 oz.
{ Rolls.....	33,972	"	33,972	
{ Biscuits...	3,843	"	3,843	
			115,815	
5. Potatoes.....	{ 287 bags.		64,288	} plates.
	{ 574 cwt.			
6. { Milk	1,340½	galls.	26,810	} basins.
{ Cream	222½	"		
7. Oatmeal.....	4,480	lbs.	17,920	
8. Tea.....	211	"	37,136	} cups.
9. Coffee.....	287	"	50,512	
10. Sugar	3,596½	"		
11. Butter.....	1,607½	"		
12. Cheese	383½	"		
13. Eggs	660	dozen.		
14. Mustard, Pepper and Salt	{ 723	lbs.		
15. For Washing and Cleaning	{ 99½ " Brown Soap. 383½ " Soft Soap. 316 " Soda.			

Messrs. Muir and Son, of Manchester, estimate the cost of fitting up a room to accommodate 100 persons at a time, for breakfast, dinner, and tea, as follows:—

Boilers, cooking stoves, tea and coffee apparatus...	£	s.
Tables and seats	28	10
Table ware, knives, forks, and spoons	24	8
Lighting, £10; Scullery, £15; Fixtures, Weights, Measures, &c., £15	20	0
	40	0
	£112	18

DISCUSSION.

The CHAIRMAN said he understood they were honoured by the presence of Mr. Corbett, and he begged to call upon that gentleman to favour them with some observations on this highly-interesting subject.

Mr. CORBETT replied that he really had nothing to add to the very copious explanations which had been given by Mr. Burrell in his paper.

Mr. COOK wished to state that no later than in December last he visited one of these cooking depôts in Glasgow, and there partook of a basin of soup, for which he paid a penny; and he could testify in favour of Mr. Corbett's establishments, that he had seldom tasted better provisions, whilst, in quantity, nothing was left to be desired by the most hungry customer. During his stay in Glasgow the most lively interest was manifested in these establishments by other classes than those for whose benefit they had been instituted, and ladies of high rank visited them and tasted the food which was there provided. He fully agreed in the opinion which had been expressed by Mr. Burrell as to the desirability of introducing similar establishments into the metropolis, because he believed the poorer classes were more imposed upon, and were generally worse supplied with articles of food, than almost any other class.

Mr. BATTY, as one who had been brought up an artisan, would state that in London, Birmingham, and

other large towns, there existed at the present time abundance of places at which the working man could be supplied with a decent basin of soup and bread for 2½d. He considered it a degrading reflection that it should be said of the poorer classes that they did not know how to cook food for themselves. He should be sorry to trust to these establishments to supply him with food, because he could not but think that there was a temptation on the part of those connected with them to purchase inferior qualities of provisions, and retail them so as to make much larger profits than had been described in the paper. He thought they ought not to introduce these large establishments, which would take away the living of hundreds of little tradesmen who had to pay rates and taxes, and by whom he considered the working classes, who required such accommodation, were supplied with food at as reasonable a price as could be expected. He fully subscribed to the objection to which allusion had been made in the paper, that these large establishments, conducted in the manner that had been described, tended to wean the working man from his domestic circle; and he was of opinion that the great object to be sought for was to teach the poorer classes how to cook for themselves.

Mr. HILTON would call the attention of the meeting to a paper which was read before this Society several sessions ago, upon the trades and habits of street-hawkers,* in which a very vivid comparison was drawn between the meretricious attractions of the gin-palace, with its glare of light and handsome fittings, and the dirty, dull, uninviting coffee-house at the opposite corner of the street, the internal appointments of which were certainly not of a character to tempt the working classes. He could not go with the speaker who preceded him in considering that the food and accommodation supplied to the working man at those establishments where he could now get a basin of soup and bread for 2½d. were such as he required. Putting aside the question of profit, which he believed was the last consideration, he was of opinion that the establishments described by Mr. Burrell would confer immense advantages upon those of the working classes who, from the nature of their occupation, in large towns, were constantly shifting from one place to another. In London large numbers of artisans worked daily two, three, and four miles from their homes. Where were those men to go for their dinners? A great many took cold food with them in the morning, and went to the public house to eat their midday meal, amidst the fumes of tobacco. Without going minutely into all these matters, he believed such a system as Mr. Burrell had described would be hailed as a great boon by the working men of this metropolis. It was a remarkable fact which had been stated to them that those low-priced dining establishments were capable of being conducted on the liberal scale described, and yet return a profit of 25 per cent., which was generally admitted to be a fair return for investments in trade. He was quite sure these establishments would receive very large patronage from the classes whom they were intended to benefit, and he had not the least fear that they would be otherwise than self-supporting. He thought they must not look to have these central depôts in London too large, but that they would require to be diffused in localities where they were most needed.

Mr. HUGH BIRLEY remarked that, like Mr. Corbett, he might have said, after the very comprehensive paper read that evening, it was scarcely necessary for him to make any remarks, for in his opinion they were not met to argue upon any debateable question, but to discuss a matter so clear, simple, and valuable, that the only surprise to all must be that it had not been thought of long ago. He was surprised to hear a gentleman who avowed his connection with the working classes express any doubt as to the value of this system; in fact, that gentleman had more than doubts, for he appeared to think it would be injurious and demoralising to the working man. He

* See *Journal*, Vol. V., p. 298.

confessed he entirely differed from that opinion. His experience in Manchester, which had not been very long, was quite sufficient to show the value of these institutions. He had never heard a hint of the kind suggested by Mr. Batty. There seemed to be one universal feeling on the part of the working classes, that this was a decided boon to them. They seemed to understand and appreciate it thoroughly. His own expectation was that at first there would be a good deal of hesitation; that the people would wonder what it meant; whether it was a charitable scheme, which would be repugnant to the man of independent feelings, or whether it was only to be tried for a month or two and then to be put an end to. But instead of that, he might say from the commencement the working classes had entered heartily into the movement, and the attendance at these cooking depôts had been exceedingly regular. There was one point he had remarked which touched upon the question of domesticity alluded to by one of the speakers—that was, that when the men were not at their work there was a great falling off in the attendance at these establishments. During Christmas time, on Saturdays, when they left off earlier, and on Mondays, when they were not always regular at their work, there was a very marked falling off at the dining-rooms, which was a satisfactory proof that they preferred going home when it was equally convenient for them to do so. He would urge another point—There was no reason why cooked food should not be taken from these establishments to the houses of the working classes, which would be a great saving of time to the wife, who, in addition to the charge of her family often worked at the mill. He thought a well-cooked dinner, which only required the final heating supplied at the house of the working man, would tend as much to promote the harmony of the domestic circle as a badly-cooked dinner prepared by a woman who had little time at her disposal for the purpose. So much then for the domesticity of the question. The plan adopted in Manchester had been taken from that originated by Mr. Corbett in Glasgow. The establishments were conducted with the greatest order; everything was clean and neat; and this had a tendency to elevate and refine the mind of the working man, an advantage which he seemed to thoroughly understand. He had not seen a single instance of misconduct in the establishment with which he was connected. He had seen men come in a partial state of intoxication who appeared awed by the orderly state of things around them, and he had thought what a mistake it would be to introduce into such places even the moderate use of intoxicating liquors. He would not like to send a partially intoxicated man away a little more intoxicated than he was before. Then as to the large number of boys and youths who attended these rooms, they learned better habits than the public-house could teach. He thought the introduction of beer would lower the tone of these institutions. He did not profess to be a total abstainer himself, but he had seen the value of the system as carried out in Glasgow, and he had followed out that system in Manchester, and had found it to be a perfect success there. He would say further, that the diet supplied was not of a nature calculated to stimulate the passion for intoxicating drink. The plain soup, meat, and coffee sent a man away little disposed to seek the public-house. Lemonade, soda-water, and ginger-beer were supplied at a penny per bottle, so that if the people were thirsty, they had abundant means of quenching their thirst, and he had found that working men were not anxious to get stimulating drinks when they could be supplied with those which were not so at moderate prices; but it unfortunately happened that in many public institutions the incentives to intoxication were put before the people, and none of the incentives to temperance. He therefore thought the course which Mr. Corbett had taken was the right one, and he rejoiced to find it was proposed to imitate it in the metropolis, where he was quite sure they could have establishments of this kind which would prove of immense benefit to the

working population. He concurred with the proposal of having several large central establishments. Hitherto all that had been done in this direction had resulted from private enterprise; but if they had begun upon too ambitious a scale, there was risk of temporary failure, which might discourage those who were the warmest advocates of the system. It was a matter of time to induce people to quit their old haunts and frequent new ones, and this remark applied more to those portions of the day when working men were led to attend public-houses, which it was part of the object of these institutions to wean them from. He had prepared a few statistics of his own establishment, which it might interest the meeting to hear. A daily record was kept of the number of attendances, as well as of the quantity of food supplied. The average daily attendance was 660. In the month of January last the number was a little over 17,000, and he had a record of individual expenditure during the last ten or twelve days of that month, which showed 32 at a $\frac{1}{2}$ d., 1,604 at a 1d., 915 at $1\frac{1}{2}$ d., and 1,201 at $2\frac{1}{2}$ d., the average being about $2\frac{1}{2}$ d. per head.

The CHAIRMAN inquired what was the average daily cost of a working man maintaining himself entirely at these establishments.

Mr. BIRLEY replied, taking all meals would cost from 6d. to 7d. per day.

Mr. G. F. WILSON, F.R.S., said, in confirmation of what Mr. Birley had told them, he might mention a similar instance which originated entirely from the action of working men themselves. This was at the works of Price's Candle Company, where a large number of workmen were employed in the night, and an arrangement was made for engaging a cook to prepare the food brought by the men themselves. That system went on for some years, but it was found that the cooks gradually introduced a sub-trade for their own benefit—supplying provisions on their own account. This was winked at at first, until it came to be a rather large concern of a private character. His brother had since been at the expense of building a proper room, and fitting it with cooking apparatus, and two cooks were engaged at 25s. per week each, and by that plan a substantial meal of meat, with potatoes and greens, was supplied for 5d. That was done in the neighbourhood of London, paying the wages to the cooks which he had mentioned. On comparing the rates at Glasgow and Manchester with the London prices, he thought the system carried out in the north might be introduced here at a slightly increased rate.*

Dr. RIDDELL said his attention had been directed for many years past to the benefiting of mankind in connection with our domestic institutions, and the means of adapting the productions of the animal and vegetable kingdom so as to afford the greatest amount of nutriment to the human race as food. It was a natural instinct of all animals to be fond of good food, and why should man be an exception to that rule? and why should not the working man have the best food that his means would permit him to obtain? In the case of these institutions, a man might attend and get his meals (however cheaply they might be supplied), and leave his wife and family but scanty provision at home; but if the wife were taught how to cook the food which it was within her husband's means to supply, he believed the man would prefer to have his meals at home, notwithstanding the attractions of the penny basin of soup and the newspaper to read. He would engage to make good nutritive soup for any public kitchen at sixpence per gallon, which, of course, could be sold, to yield a good profit, at a penny per pint. The great advantage of these establishments would be to those workmen who were unmarried, and had no dwellings except

* Prices of provisions supplied at Sherwood Works, Battersea:—Tea, $\frac{1}{2}$ of a pint, $\frac{1}{2}$ d. Coffee, $\frac{1}{2}$ of a pint, $\frac{1}{2}$ d. Cooked meat, without bone, mutton, beef, roast pork, &c., 1s. per lb. Bread and butter, 6 ozs., 1d. Cake, 3 to 4 ozs., 1d. Soup, per full pint, 1d. Potatoes, $\frac{1}{2}$ d. Other vegetables, $\frac{1}{2}$ d. Plum pudding, about 6 ozs., 1d. Rice, bread pudding, 8 ozs., 1d.

the room in which they slept. The great point, in his opinion, was to instruct the rising generation of females how to prepare food to the best advantage, so as to be at the same time palatable and nutritious, and he had never neglected any opportunity of impressing the importance of that branch of training upon those who were entrusted with the education of young females in any public schools and institutions.

Mr. SOUL (Secretary of the Orphan Working School) stated that in that institution cookery was a branch of female education, but it was impossible in large establishments to give them that training which was applicable to the requirements of a family. He thought they were much indebted to Mr. Burrell for having brought the subject before a London audience, and also to those gentlemen of whom mention had deservedly been made as the founders of these establishments in Glasgow and Manchester. He considered such dépôts were greatly needed in the metropolis. There were thousands of young men who were obliged to dine daily at eating-houses to whom this system might be made applicable as the means of providing them with a better dinner and superior accommodation at a considerable sum below what they now paid. At the buildings going on in every part of London, workmen might be seen eating their dinner, sitting upon a wet, cold stone, with their wives, who had brought the meal, with only an accompaniment of cold tea or coffee. To such the establishment of a cooking dépôt upon the plan described would be an immense advantage. The experience of the institution with which he was connected, as well as of others, proved that where food was prepared in large quantities, and in a proper manner, it could be supplied at incredibly low rates, and leave a profit. In the Orphan Working School the expense of food and washing did not exceed 4s. per head per week. In a similar institution at Croydon, in connexion with the Society of Friends, the average cost was 4s. 6d. per week. It was the same in the London Orphan Asylum. In the City of London School for Sons of Freemen, it was 5s. per week; and at a school in Yorkshire, where they had the advantage of obtaining the produce of a farm, the cost was as low as 8s. 7d. per head per week, and he had heard of instances in other parts of the country even lower than that. Looking to the vast area of the metropolis, he apprehended that, to make this system effective, the central establishments would require to be very numerous, from which more wide-spread branches could be supplied,—indeed, they might multiply the branches to almost any extent required. This paper was useful as having taught them the value of the penny, for the majority of the articles supplied from those dépôts were sold at that price, although the meat was charged twopence.

Mr. MACLURE said the point had been raised as to whether these institutions could be made paying, and, at the same time, advantageous to the classes for whom they were established. He was surprised to hear an expression of disapproval of this system from one who avowed himself as belonging to the working classes. He was the more surprised to hear the objection raised on the ground that it would prove injurious to the domesticity of the working man. He could hardly conceive that the great body of operatives working all day, many of them at long distances from their homes, with only a limited time allowed them for meals, could go home and receive as good a meal as could be supplied to them in establishments of this character. One speaker had said he could make good soup for sixpence per gallon, or less than a penny per pint: but could anyone say that the wife of an operative could make good soup for that cost? The results they had heard of could only be obtained by the preparation of food in very large quantities, and by the most economical modes of cookery. He could not conceive how it could have entered the mind of any person that such a system as this was calculated to have a demoralising tendency upon the working

man or to alienate him from the family circle. Looking at the great advantages which the system was calculated to confer upon the working-classes, he hoped the attempt would be made to establish it upon a large scale in London.

Mr. NASH totally discarded the objection that had been raised against these establishments, on the ground that the system would derange the domestic habits of the community for whose benefit it was set on foot. His only surprise was that the movement had not been made long since. Mr. Nash proceeded to point out the successful results which had attended a similar establishment thirty years ago at the Lanark Twist Mills, where 2,000 persons were employed. He believed that nothing but the most complete success would attend the establishment of these dépôts in London, and that the poorer classes would be greatly benefited by them.

Mr. NEWTON WILSON would refer to one phase of the question which was prominent in his own mind, but which had not been alluded to by those who had preceded him. There was one peculiar feature about London which distinguished it from any of the towns in which this system had been adopted. He had lived in Glasgow, and he had been an employer of labour for many years in Manchester. In the latter place each working man for the most part lived with his family in a cottage, and was not confined merely to the occupation of one apartment, and they had the means of cooking for themselves, with fuel at a very reasonable price. In London, from the large size of the houses and the high rents, the operative was obliged to live in one room. Any one who visited those apartments, as he had done, would find that they had neither cooking ranges nor ovens, and fuel was too costly in London to admit of the extensive use of it. If, therefore, such a system as they had heard of had been successful in Manchester, where they had conveniences for cooking, and fuel at a moderate cost, it would be infinitely more valuable in London. He rejoiced to hear that such a scheme had been proposed for this metropolis, and he believed it was the right course to take. It had been stated that the plan was carried out on a limited scale by a philanthropist in Scotland 30 years ago, but still it was unknown in London at the present day. He thought it was an institution which deserved their warmest support, and although objections might be raised against it by the present class of coffee-house and eating-house proprietors, there could not be a difference of opinion as to the benefit it would confer upon the working classes of the metropolis.

Dr. EDWARD SMITH thought the promoters of this movement had every reason to be satisfied with this discussion, as expressive of a general concurrence in the system which had been brought under their notice. At the same time he did not think they could enter into it with that spirit of heartiness which they did in the North, where a large amount of other good work was also in operation. He had been through the North, and had visited those establishments from which food was supplied to the working classes, and he had been perfectly astonished at the vast organisation which existed throughout those districts for accomplishing these objects. He was also surprised at the excellence of the food itself, and the low prices at which it was supplied. He had in his possession upwards of 100 of these dietaries, which he should take an opportunity of publishing, and he was sure they would create as much surprise in the minds of those who read them as they had done in his own. There were, so to speak, two distinct methods in which such a system could be carried out; one was the supply of food at the bare cost price; the other was to supply it at prices which left a small profit upon each article, to meet the expenses of the establishment. He had seen this system in operation in Glasgow, and his belief was that it was an unmixed good. He could not conceive that there could be the least objection to its extension, if occasion required it, or to its intro-

duction into London. There were, however, a few things which it struck him it would be well to mention by way of caution in any future proceedings in this direction. He had no fault to find with the existing institutions. They were well conducted, and supplied good food at extremely small prices. At the same time he thought there was a tendency to certain evils which he would briefly refer to. In the first place, he assumed, as a necessary condition, that the collateral expenses of the establishment should be kept down to the lowest possible amount. What was the main object in the establishment of these institutions? He took it that it was not a charitable but a philanthropic means of doing a large amount of good, not making it a mere commercial enterprise. The gentlemen who had set these establishments on foot had not done it to make money, but they only wished to recover the money they had expended with perhaps a small amount of interest for it. Taking that view of the question—to what class of the working population did they address themselves? They were divided into many classes. In Manchester, the fine spinners—even such as were employed now—received 50s. per week wages, while the coarse spinners were paid only from 15s. to 18s. per week. He would therefore ask to what class did they intend to direct their attention? Regarding these philanthropic institutions, they ought to consider, mainly, the lower division of the working class. Those who especially needed their help at this time were the very poor; therefore, that must guide the whole question. Mention had been made of the character of these establishments, and he thought he saw in Manchester that they were getting too good-looking establishments. Working men would not go into such fine-looking places. That of Mr. Pender, in his opinion, fulfilled the purposes the best of any he had seen. There they had the floor of a large mill kept scrupulously clean and neatly furnished. It did not drive away the lower division, by being apparently too costly, and did not attract too much the upper division of the working class. He would, therefore say, with regard to every detail of the establishment, that the strictest economy should be exercised, and that would enable them to give the greatest amount of food for the money. He thought it fair, if the basin of soup cost three farthings, that it should be sold for a penny, and that a portion of the meat should be given with the soup. He would make one remark, with reference to the tea and coffee, that as there was very little nutriment in either tea or coffee of themselves, the object should be to supply as much sugar and milk as possible, both of which contained a great amount of nutriment. With regard also to the size of the establishments, he did not think they could be made self-supporting unless they were conducted on a large scale, as the profit, though a good percentage on some articles, was small upon the whole; and with regard to central establishments, he believed the fewer centres they could manage with the better, because the food could always be better cooked in large quantities, and could be distributed easily from the centres to the branches. He thought it very desirable, in commencing an establishment of this kind in London, to begin with one on a large scale, and from thence distribute to the branches. With regard to the introduction of intoxicating liquors, it was thought by some to be injudicious, because their aim should be to supply the largest amount of food at the smallest cost; if they added beer they introduced an expensive article. As far as he had seen of these establishments, he believed them to be of vast benefit.

Mr. W. HAWES said in looking at the introduction of a new system into this metropolis, it was necessary not only that they should clearly understand the principles upon which the scheme was brought before them, but that they should be satisfied it was not, as his friend Dr. Smith said, philanthropic only, but self-supporting. He believed the working men of this country would value

this institution less if it were regarded as a philanthropic rather than as a commercial enterprise.

Dr. SMITH said he had used the term philanthropic as distinguished from charitable.

Mr. HAWES said the argument as he understood it was that philanthropy was to be exercised in bringing the cost of the articles to that point that the establishment should just pay its own expenses; that a pint of soup, costing three farthings, should be sold for a penny. Then the question was, would that difference pay the expenses of these establishments? If it fell short of paying interest on the capital, and the ordinary expenses, then their philanthropy verged closely upon charity. The first question then was, what was the principle involved? That was, buying at wholesale prices and selling at the cheapest rate that could be done to the advantage of the working classes. He believed this could be done advantageously. Hundreds of thousands of persons left their homes in the morning and could not return to them till the evening, no matter how good cooks their wives might be, or how comfortable their houses were; and, at present, they were not supplied with a mid-day meal so cheaply as they ought to be. In addition to that, they had the large class who had no wives to cook their food, and no homes where it could be cooked; and in that class alone there were sufficient to support a vast number of these institutions in the metropolis. They had their penny postage, their twopenny baths; they had, in a variety of cases, proved that the labour and capital of intelligent persons might be so combined as to produce most advantageous results to those who had neither capital nor labour to dispose of. Could anyone doubt that that which was the means of giving more wholesome food was good? What better contributed to make a man go through the labours of the day than good food? And if they supplied the poor with a sufficiency of this, it acted favourably upon the poor-rates and upon the hospitals, and it conducted in every way to render the people more contented, and the health of a town better than would otherwise be the case. They were, therefore, much indebted to the gentleman who had brought this subject before them. He repeated his conviction that there could be no question as to the amount of good that would be done, but at the same time they must satisfy the public that it could be done upon those principles which they looked for in associations of this kind; and unless they could show that it would more than merely pay, he did not think they would have the support of capitalists. He could not give his assent to the observations which had been made as to the exclusion of beer from those establishments. He believed the working-man must have his beer, and to ask him to take his dinner with only a glass of water, was asking of him more than he would do. By this means he believed they kept out of these establishments a class of men to whom they would be of the greatest utility, and drove them to the public-house.

The CHAIRMAN said that much of what he had intended to say on the peculiar needs of such institutions in London, had been anticipated by Mr. Hawes and by other gentlemen. It was essential, no doubt, to the success of such new establishments, that they should be based, not upon charity or upon benevolence, but upon thoroughly sound commercial principles of remuneration and self-support. The later economical principles were not of buying cheap and selling dear, but of buying cheap and selling cheap, quick returns of small profits in ready money purchases, and always consulting the interests of the consumer. He knew an eminent merchant, who had made a great fortune, chiefly by adhering to this principle, and consulting closely the interests of the consumer. Asking him how it was, that with such simple principles, the application of which had been so profitable, he had not had more competitors, the answer was, that the persons who could see the extent and bearing of a simple economical principle, and who had the ability and nerve to apply it constantly against the temptations of immediate profit, were really un-

common. Common-place speculators or managers could not resist the temptation of buying occasionally low-priced and inferior meat, and would not see the commercial importance in the long run of having everything at all times of the best quality. Such persons, if left to themselves, would relax the order and discipline of which they could not see the commercial importance. Hence it was most important, at the outset of the new institutions, that they should have the superintendence of such practised and successful leaders of industry, men of enlarged commercial views, as the gentlemen who had originated, and by their superintendence achieved, the success which had been gained in Glasgow and Manchester. Hence, also, it was desirable that ladies accomplished in household management should give such superintendence, to see that the cookery was of the best, and that order was maintained amongst the female attendants, as had been given by Mrs. Eason Wilkinson and Mrs. Corbett. Such priceless voluntary service appeared to him to be necessary, in the first instance, to ensure the complete success of the commercial principle. As to there being any detriment to household economy or to home associations from such institutions, he deemed that illusory. The prejudice against most clubs for the wealthier classes, on that score, had little foundation in fact. The proportion of regular diners, or livers at the clubs, were a minority of the whole number of members, often a very small minority, mostly bachelors and widowers, and the married men dined at clubs only occasionally, and the same principle would apply to the new establishments for working-men. In some of the existing clubs, cookery was taught to servants, and the proposed new institutions might also be used as means for teaching cookery to the working-classes; indeed, Mrs. Eason Wilkinson had provided for the teaching of cookery to females at her dining-rooms. As had been stated, there was a large proportion of the working population with no real homes, or means of cooking, and with only inferior sleeping places. With the assured means of production at wholesale prices, and of a cheap ready money distribution, they were not justified in setting them aside on speculative objections, which actual practice in Glasgow and Manchester proved to be illusory. Why should they keep the labouring classes in towns dependent on the expensive, and, after all, wretchedly ill-paid distribution, by small retail shops, and on the ruinous credit-system? The recent experience of the great firm to which Mr. Hugh Birley belonged showed how great was the loss of the labouring classes under the existing wretched conditions. That experience proved that a given amount of wages expended on food in small retail shops, on credit, and which produced only $1\frac{1}{2}$ days' subsistence, when so provided in the retail ready-money shops produced two days' subsistence, and when expended on goods purchased wholesale for ready money, provided nearly three days' subsistence. He might here be permitted to mention that that firm had, at their own cost, nobly supported their workpeople during the recent distress, an instance of generosity which he thought should not be unnoticed. Mr. Hugh Birley had told them that the average number dining at his rooms was about 600 daily. The purchase, preparation, and sending out the daily food to such a number would, on the common system, occupy probably fifteen or twenty separate small retail establishments. Hence there were probably fifteen or twenty rents, rates, and taxes; fifteen or twenty cooking apparatus, of inferior economical power; fifteen or twenty sets of persons, of an inferior class; fifteen or twenty establishments, purchasing and living on credit, commonly distributing on credit, as against the one large establishment, purchasing wholesale for ready money the best commodities, converting them with superior and more economical mechanical appliances, such as had been displayed (those in Mr. Muir's drawings), and distributing them more economically for ready money. It was mainly these economical elements, the larger wholesale ready-

money purchases, the avoidance of the waste of multiplied inferior establishments, and the economical distribution to large numbers, which effected the economy adverted to in the paper as existing in large public establishments. The result already attained, with profits amounting, as had been stated, to nearly one-third of each penny paid, was to give, he believed, about two and a-half days' subsistence (a sufficient healthy subsistence, as had been stated, at sixpence halfpenny per diem, with new comforts) as against the present one and a half day's inferior subsistence, only obtainable for the same amount of money. It really appeared to amount to that. The lateness of the hour prevented him advertent to some sanitary considerations involved in the question, or doing more than proposing to Mr. Burrell the thanks of the meeting for the very important paper which he had read to them.

The vote of thanks having been passed,

Mr. BURRELL, in acknowledging the compliment, remarked that it was not to be supposed that one central establishment would be sufficient for all London. It would probably require fifty establishments on an equally large scale. As to the demoralising tendency of the system upon the working classes, he was wholly at a loss to conceive how such an idea as that could for a moment be entertained.

On the wall were exhibited diagrams of a series of the placards which are posted in the different institutions in Glasgow and Manchester, containing the bills of fare, charges, and regulations of the establishments. There were also diagrams of the apparatus used in cooking and serving the rations. On the table were arranged complete sets of the ware used at the various depôts, contributed by Mrs. Eason Wilkinson, Mr. Birley, Mr. Pender, M.P., and Rev. Canon Richson. In one of the Society's rooms a cooking apparatus had been erected, and rations had been prepared, identical in every respect with those ordinarily consumed by the working men and women frequenting the depôts at Glasgow and Manchester. These had been kindly supplied by Mrs. Wilkinson and Mr. Birley. Mr. Muir, of Manchester, took charge of this department, having furnished the cooking apparatus, and superintended the preparation of the rations, and the audience were invited to partake of the provisions, and to inspect the actual cooking of them; Mr. Muir, who had fitted up the depôts in Glasgow and Manchester, was in attendance to explain the details.

The Secretary announced that on Wednesday evening next, the 11th February, a paper by Mr. Thomas Webster, "On the Submarine Telegraph," would be read.

ARTISTIC COPYRIGHT.

A useful manual* of the Law of Art Copyright, containing the Art Copyright Act, 1862, prepared by

* The Law of Art Copyright; containing the Engraving, Sculpture, and Designs Acts; the International Copyright Act, and the Art Copyright Act, 1862, with copious Legal, Explanatory, and Practical Notes, &c.; with an Appendix, and Forms of Transfer and Reservation for the Use of Artists, &c. By E. M. UNDERDOWN, Esq. of the Inner Temple, Barrister-at-Law. Published by John Crockford, Wellington-street, Strand.

the Committee of the Society of Arts, and passed last session and also the Engravings, Sculpture, Designs, and International Copyright Acts, has been recently published. The introductory chapter gives an account of the history of artistic copyright in this country from the time of Hogarth. To the text of all the enactments now in force are added notes of cases bearing upon the subject, and remarks upon the summary procedure. The Appendix contains the evidence furnished by artists and others to the Committee of the Society of Arts.

Home Correspondence.

THE SUBMARINE TELEGRAPH.

SIR,—“Believe nothing you hear, and only half of that which you see,” was the maxim inculcated by the late eminent hydrographer, Admiral Sir T. Beaufort, when I first took command under his direction in 1830.

I do not, therefore, allow mere assertion or opinion to satisfy me where facts should be forthcoming, and when I assert, it is with the intention of proof if needed. I allow every man his opinion, and, if suddenly advanced as an opinion, treat it merely as such; it may be reversed on reflection. I claim the same for myself. I never doubted “magnetic storms” and perturbations—having with others recorded them—but I doubt the aurora as a cause; it is matter of opinion even if it be a result. For myself, and my staff of observers, no disturbance was noticed under the presence of a vivid aurora. The magnetic disturbances I find, from my correspondence with the first authorities of the day, have been noted before, or after, or without the appearance of the aurora; and the same high authorities have no direct proof beyond opinion which will solve these matters. I have noticed as a peculiar fact that the aurora does not prevail much above the parallel of 70° north, and, further, that the period of its appearance in 1825-26-27-52-53-54, ranged about the 27th August. I leave this matter for the opinions of our savans.

Directly bearing on the laying down of deep-sea telegraphic cables—rate of sinking, and currents of great depths—I think the following data may furnish those about to discuss this question on the 11th instant with matter for previous thought, for it will be seen that the observations made by Sir James Ross and myself, at stations far asunder, nearly at the same time, and on the same meridian, possess a peculiar interest, and it was by mere chance I discovered that he had pursued precisely the same formula in noting his operations. In my own case I decided on using the smallest possible line with a lead of 12 lbs.

Sir James Ross used spunyarn, with a weight of 340 lbs.; in both cases line was sacrificed:—First, in H.M.S. *Samarang*, 20th March, 1843, 0° 24' N., lon. 10° 37' W., calm—weight 12 lbs., line whipcord, sustaining 56 lbs. to 1 fath.; the following result was obtained:—

No. 1.

DEEP-SEA SOUNDINGS AND TEMPERATURES, 20TH MARCH, 1843; LAT. 0° 24' N., LONG. 10° 27' W.; CALM; WEIGHT LEAD, 12lb.; LINE, WHIPCORD.

Fathoms.		Fathoms.	
0 ...	2:57:33	1,600 ...	3:53:35.2
100 ...	2:59: 8	1,700 ...	3:59:12
200 ...	3: 0:56	1,800 ...	4: 3:54
300 ...	3: 3: 2	1,900 ...	4: 8:24
400 ...	3: 5:10	2,000 ...	4:14. 7.2 = 51:34.0
500 ...	3: 7:23.2	2,100 ...	4:18:11.2
600 ...	3:10:16.8	2,200 ...	4:22:15.2
700 ...	3:12:51.2	2,300 ...	4:29:30
800 ...	3:15:51.2	2,400 ...	4:39:18
900 ...	3:19:15.2	2,500 ...	4:44:33.2
1,000 ...	3:22:33.2 = 24:55.2	2,600 ...	4:49:57.2
1,100 ...	3:26:24	2,700 ...	4:54:39.2
1,200 ...	3:32:10	2,800 ...	5: 0:26
1,300 ...	3:36:57.2	2,900 ...	5: 6:24
1,400 ...	3:42:24 †	3,000 ...	5:11. 0 = 56:52.8
1,500 ...	3:48:27.2	65 broke.	

† The last 100 fathoms seemed to have struck and accelerated the motion. (Query, current?)

At 2,000 fathoms a second lead of 12lb. was sent down by messenger, but it does not appear to have materially accelerated the descent.

Thus we have for 1,000 fathoms	24:55.2	Per 100.
2,000	51:34.0	3:18
3,000	56:52.8	5:43
Time for 3,000 fathoms.....	2:13:22	4:36

No. 2.

SIR JAMES ROSS IN H.M.S. *Erebus*, 3RD MARCH, 1843.
LAT. 68° 34' S.; LONG. 12° 49' W.

	m.	s.		m.	s.	2nd diff.
First 1,000 fathoms	13	39	Rate 100 fathoms	1	50	— 0 33
2,000 ..	21	35	..	2	23	— 1 44
3,000 ..	32	19	..	4	7	— 0 22
4,000 ..	44	16	..	*4	29	
Time for 4,000 ..	1	51	49			
3,000 ..	1	17	33	lbs.	340	
<i>Samarang</i>	2	13	22			diff. 55 39

ROSS AGAIN. LAT. 52° 10' S. 336 lbs.

Fathoms.	m.	s.
500	1	21
1,000	1	43
1,500	2	6

I was not before aware that Sir James Ross had observed so closely by time. His notations depended on the slack line, taking a mark overboard. In the *Samarang* the line was taken off with a strain, on a very delicate reel, measuring each fathom with a brazen circumference, each revolution indicated by a trochiameter attached to the nave. It will be seen that the noted difference in

100 fathoms, at 2,900, was 5' 58" but
at 3,000, .. 4' 36"

and it suddenly broke at 3,065.

I have before observed that very delicate observations at a depth of 1,200 fathoms proved, at the Cape de Verds in 1830, and off the Galapagos, in the Pacific (Equator), 1838, that the current ran with equal velocity throughout the entire depth, and therefore we may anticipate a very strong action on any cable suspended between closely-situated elevations between this and Newfoundland.

Another unnoticed element, preventing any vessel from holding any absolute course over any proposed line, is that the “current-bearing” would prevent any vessel from observing any course but that which the elements permitted. The commander will do his best, but that will depend on his judgment under the circumstances. Any seaman would laugh at the idea of attempting to tow or lay down a cable *malgré* wind and currents.

I will add a few temperatures at the great depths to show that Sir J. Ross and myself found no extraordinary differences at 1,000 fathoms between the Equator and high southern (or northern) latitudes:—

No. 3.

TEMPERATURES AT EQUATOR.

Fathoms.	SURFACE 79°.
300 ...	46:00
400 ...	38:00 (?)
500 ...	46:00
600 ...	45: 5
700 ...	47:00
800 ...	45:00
900 ...	42:0 40:25
1000	39:5 42:75

Belong to water bottle.

* Curiously there is the same peculiarity in both instances, a sudden increased velocity comparatively from 3,000 fathoms. In the case of the *Samarang*, I was of opinion that the lead struck bottom, and the velocity of the current at that depth, 3,000 fathoms, drew the line more rapidly, and broke it. I suspect a similar action with Sir James Ross.

LAT. 35-50 S. 1-54 E. SURFACE 64-5.

300	...	47-25
400	...	44-50
500	...	41-50
600	...	51-25 (Current?)
700	...	39-00
800	...	42-50
900	...	41-25
1000	...	39-75

SIR JAMES ROSS. 52-10 S. 136-56 E.

SURFACE 43°.

150	...	42-00
300	...	41-00
450	...	40-00
600	...	39- 8

It has been observed that writers, not themselves the actors, have asserted as fact that which experience denies. It is well known that icebergs (I write from personal knowledge) travel at a rapid rate to windward, *ergo* impelled by deep water currents. How can the Gulf stream reach these shores without such unceasing action?

Yours &c.,

E. BELCHER.

THE JURY REPORT, CLASS XXXI.

SIR,—In making (at page 153 of this *Journal*), some rather severe remarks on the report of Mr. Tylor on Class XXXI. of the International Exhibition, Mr. J. G. Fitch seeks to represent the opinion given by Mr. Tylor on educational matters in England, as being influenced by the circumstance that I, as an opponent of the Government system of education in Wurtemberg, had had "the good fortune of meeting in England with a member of a jury holding similar views," in consequence of which, this report, far from being an independent work of Mr. Tylor, had become, under our "united auspices," rather a manifestation of hostile views than of real research.

Permit me, by drawing attention to the following facts, to show the great mistake of Mr. Fitch, and how he fell into that mistake.

Seeing that I am represented in the report of the Educational Commission of 1859-61, as contending, in common with others, for the abrogation of compulsory school attendance, and finding that statement repeated in Mr. Tylor's report, Mr. Fitch at once concludes that I was opposed in principle to any government intervention in education, and to the system of education of the Wurtemberg government. I beg, however, to state, that the very contrary is the case. It is a feature of the educational system of this government, that it grants subvention not only to the primary compulsory schools, but also to the voluntary pay-schools (*Fortbildungsschulen*) requiring government protection, and I have the honour of being entrusted with their general direction. Now, I cannot possibly be in opposition to my own duties, and therefore not to the government system of education. This must be clear to everyone, and I should have thought it would have been so to Mr. Fitch, the more so as he mentions himself that I am director of a Board standing at the head of the pay-schools, "quite independent of the Board of Education," indeed, but which schools the report of Mr. Tylor says, receive government subventions, the presidents of the Communal School Councils, being, moreover, usually appointed by the government. It is obvious that under such circumstances I should not be likely to be opposed to the participation of Government in the direction of educational affairs in general; and, on reflection, Mr. Fitch will, no doubt, find himself induced to give up his hastily-formed conclusion, and do justice to Mr. Tylor, remembering that it was he who started the educational question in his report on the Paris Exhibition of 1855, owing to which report the jurors of Class XXXI. may have been induced to elect him as the reporter for their class.

Mr. Fitch, being himself reporter for Class XXIX., must certainly know very well at what time and under what circumstances the jury reports were made; he knows that they were made after the dissolution of the juries, that they were to be sent by the reporters directly to the Commissioner for juries without passing through the hands of the Chairman, and that, therefore, the latter cannot be responsible for their contents. In drawing attention to this, I must, however, add that, even if I had been at full liberty to cancel the whole educational part of Mr. Tylor's report, I should not have done so. Mr. Fitch says himself, "I think that we want the opinion of such men as Mr. Tylor on the subject," and this is just my own opinion, and was my opinion, and that of my colleagues, the foreign jurors of Class XXXI., at the time when we approved of Mr. Tylor's intention to add to his report some remarks upon the question of education. I, for my part, feel very much obliged to Mr. Tylor for having led me, by these remarks, to make further inquiries into educational matters, cautioning me against too much legislation and government interference, whilst I am at the same time equally thankful for many valuable hints which I have been able to take from some of the numerous institutions connected with the Department of Science and Art at South Kensington, especially from that Department itself, which I observed with pleasure forces its aid upon nobody, and has no desire to interfere with the free development of self-supporting institutions, as, for instance, the excellent school at Bradford.

Mr. Tylor's report acknowledges, moreover, that in Class XXXI. a great progress has been observed with respect to the improvement of goods in an artistic point of view; and if this is not due to the influence of the above-mentioned institutions, this may be accounted for by their being of very recent origin, or perhaps by the circumstance that hitherto there has been a great want of competent teachers, to give instruction in Art as applied to industrial production, of which the hardware class is especially in need, but which can only be obtained in the course of time. At any rate it is very desirable that such wants should be pointed out, and, in my opinion, this may very appropriately be done in the jury reports. Should any erroneous views have crept in, I should not regard this as a matter of consequence, because there will be always some truth mixed up with them, and opportunity for correcting them is everywhere at hand. The International Exhibitions have brought men from all countries, of the most different occupations, and of the highest capabilities, to meet and to become good friends enough to exchange their views in a cordial way, and to make them known to all the civilised world. Though there are in Mr. Tylor's report some strictures, bearing upon a sphere of my own activity, to which I am devoting myself with particular pleasure, I yet did not hesitate to make arrangements to bring this very interesting report to the knowledge of the German public. On the other hand I am inclined to think that Mr. Tylor will perfectly agree with me, when I add that I am quite ready to give the same publication to any remarks directed against it, provided they bear strictly on the subject.

I am, &c.,

DR. VON STEINBEIS,

Ex-Chairman of the Jury of Class XXXI.

Stuttgart, February 1st, 1863.

MR. ISBISTER'S PAPER ON A PROPOSED PENAL SETTLEMENT.

SIR,—Notwithstanding the numerous and able letters upon this very painful subject which have appeared of late in many of the public prints, the paper read at the Society's rooms, and the discussion which followed, no immediate and permanent remedy has been as yet suggested that may be likely to effect two such desirable objects as the prevention of crime and the destruction of those nurseries of vice and crime with which all our towns

and cities are so much infested—well named, by a writer in the *Times*, "Guilt Gardens."

Discarding for the present all idea of the reformation of born and bred criminals as quite utopian, the only certain means of preventing crime and its repetition is to shut up for life all who have been guilty of atrocious crimes after the first, and for all minor offences after the second or third conviction. Our present jail room will be found more than sufficient for the purpose of life-prisons, for, from the moment that such a law shall be promulgated, the nefarious trade will be found unprofitable, and, as a certain consequence, will be in a great measure abandoned.

All that regards the treatment, education, and employment of such life prisoners may and should be left to future and very mature consideration, when the frequency and repetition of crime shall have been somewhat restrained by life imprisonment for all atrocious and repeated offences.

The severest punishments of former times, even to torture and death, failed to abate in the slightest degree the tremendous list of crimes very partially recorded in the scanty annals of those days; and it must always be borne in mind that, in nine cases out of ten, the punished convict comes out of prison a more ferocious wild beast than he went in. In fact, the word "punishment," as well as everything relating thereunto, must be eradicated from our criminal code in all but very juvenile cases. Punishment is an act of legal revenge for which the convict will make the public pay dearly when he comes out; whether on ticket-of-leave, or otherwise, is not a matter of the slightest moment.

Transportation, no matter where, is no remedy—not even a palliative. It never caused the slightest diminution of crime, when shiploads of convicted felons left our shores almost monthly, and is now nearly impracticable. It is utterly useless for the intended purpose, very costly to the nation, and is, in itself, an offence against the world, for we have no moral right to create penal settlements in other lands in order to get rid of a criminal population fostered by ourselves into gigantic proportions in the back slums of our towns and cities. Penal settlements require centuries to get rid of the convict leaven; witness the intolerable slang, an unmistakeable sign of vice, that now prevails in the colloquial languages of America, New South Wales, and Van Dieman's Land, all convict-founded colonies. Life-prisons at home, on the contrary, will become beacons not to be misunderstood, and independently of all other beneficial effects, will introduce a vast economy in our now costly and extravagant criminal law proceedings, both before and after trial.

With reference to the second great object, namely, the destruction of those nurseries of vice and crime, the wretched back slums of our towns and cities, we must first get rid of ground rents and ground landlords, an undertaking that may be readily accomplished by carrying out all indictments for nuisances against the lord of the soil instead of against the lord of the house or tenement, when all such nuisances will speedily disappear.

It is not to be expected that unless pressure from without be applied, rich and noble lords of the soil would ever of their own accord abate such intolerable nuisances as those tenements, for the substantial reason that, owing to the fearful density of the inhabitants of such localities, they yield a larger revenue than handsome rows of good houses occupying a similar amount of space.

HENRY W. REVELEY.

Reading.

Proceedings of Institutions.

METROPOLITAN ASSOCIATION FOR PROMOTING THE EDUCATION OF ADULTS.—On Tuesday, January 20th, a meeting was held at the Working Men's Institute, Hack-

ney, to take into consideration the plans of the Association. The chair was taken by B. Tite, Esq.; and Harry Chester, Esq., chairman of the committee, Rev. C. Robins, and J. G. Fitch, Esq., attended as a deputation: Several working men present have since given in their names as candidates for examination. The speech of Mr. Chester has been reprinted for circulation. A similar meeting was held under the presidency of Sir W. Farquhar, in St. James's School-rooms, Westminster, on January 27th. There was a goodly attendance of parishioners. Among the clergy present were Rev. J. Kempe (rector); Rev. S. Leathes; Rev. J. J. Oakley; Rev. J. G. Cowan; Rev. H. Jones; Rev. G. Smith; Rev. H. Geary; Rev. H. Richardson; Rev. P. H. Duval. The association was represented by the chairman and hon. secretary. On the motion of the Rector, it was resolved to establish a local board to carry out the examinations of the Society of Arts, and the plans of the Metropolitan Association.

MEETINGS FOR THE ENSUING WEEK.

- MON. ...R. Geographical, 8½. 1. Consul S. S. Saunders, "Inundations of the Nile." 2. Report by Dr. Baikie, F.R.G.S., "On the Countries in the neighbourhood of the Niger." 3. Lieut. Oliver, R.A., "Notes on Madagascar." British Architects, 8. Medical, 8½.
- TUES. ...Medical and Chirurgical, 8½. Zoological, 9. Civil Engineers, 8. Discussion "On the Sleeper Woods of the Madras Railway." And, if time permits, 1. Mr. John Fulton, "Description of the Drainage of Dundee." 2. Mr. A. Williams, "Description of Drainage Works of Newport (Mon)." Syro-Egyptian, 7½. "Memoir on the Discovery of the Sacred Pace and Cubit of the Hebrews, as also of a Hebrew Christian Inscription of the year 135 of Our Lord," by the Duke of Roussillon. Royal Inst., 3. Prof. Marshall, "On Animal Mechanics." R. Horticultural, 1. Anniversary.
- WED. ...Society of Arts, 8. Mr. Thomas Webster, "On the Submarine Telegraph." London Inst., 7. Graphic, 8. Microscopical, 8. Annual Meeting. Literary Fund, 3. R. Soc. Literature, 8½. Archaeological Association, 8½. Rev. Prebendary Scarth, "On a Roman Villa at Combe Down, Bath."
- THURS. ...Royal, 8½. Antiquaries, 8½. R. Society Club, 6. Royal Inst., 3. Dr. E. Frankland, "On Chemical Affinity."
- FRI. ...Astronomical, 3. Annual Meeting. Royal Inst., 8. Dr. E. Frankland, "On Artificial Illumination." Royal United Service Inst., 3. Dr. M. Roth, "The Means for Scientific Physical Training, and on Rational Gymnastics."
- SAT. ...Royal Inst., 3. Mr. W. S. Savory, "On Life and Death." R. Botanic, 3½.

PATENT LAW AMENDMENT ACT.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

[From Gazette, January 30th, 1863.]

Dated 28th October, 1862.

2899. J. Fletcher, sen., Leeds, and J. Fletcher, jun., Newcastle-on-Tyne—Imp. in machinery for shaping iron and other metals.

Dated 31st October, 1862.

2948. T. Gibson, Berwick-upon-Tweed, T. Hall and T. Davison, Gateshead—Imp. in railway breaks.

Dated 7th November, 1862.

3014. J. H. Johnson, 47, Lincoln's-inn-fields—Imp. in decorticating grain and seeds. (A com.)

Dated 2nd December, 1862.

3229. J. Craven, J. Craven, and J. Robinson, Clayton Mill, near Bradford—Imp. in looms for weaving.

Dated 22nd December, 1862.

3418. M. Clark, Glasgow—Imp. in treating waste liquors obtained when dyeing Turkey red colours.

Dated 23rd December, 1862.

3424. C. A. F. Collette, Giberville, near Caen, France—A new kind of lace.

- Dated 31st December, 1862.*
3489. F. Loret, Meckling, Belgium—Imp. in constructing double weft-forks applicable to every description of power looms.
- Dated 2nd January, 1863.*
21. R. C. Ransome, Ipswich—Imp. in reaping machines. (A com.)
- Dated 7th January, 1863.*
57. T. Storey, Lancashire—Imp. in compound waterproof and ornamental fabrics.
61. T. Aveling, Rochester—Imp. in the construction of traction engines.
- Dated 8th January, 1863.*
69. C. Allen, Basinghall street—Imp. in apparatus for signalling on railways by detonating or explosive signals.
- Dated 9th January, 1863.*
71. J. Punshon, Pemberton, near Wigan—Improved means or apparatus for preventing overwinding at collieries, and to provide extra breakage power to steam engines.
73. W. H. Tucker, 6, Southampton-street, Strand—Imp. in locks, and in the modes of connecting the knobs and spindles of the same.
75. C. E. Gray, Great Suffolk-street, Borough—Imp. in wringing machines.
77. M. Cartwright, Islington—Imp. in alarms for portable and stationary uses.
79. E. T. Hughes, 123, Chancery-lane—Imp. in machinery or apparatus for printing or staining woven fabrics, warps, paper, and other articles. (A com.)
81. W. H. Moreland and J. Chappell, Loop-bridge Mill, near Belfast, Ireland—Imp. in winding, warping, beaming, or dressing machines.
- Dated 10th January, 1863.*
85. W. Grove, Tenbury, Worcestershire—An improved apparatus applicable to the sawing and cutting of wood or other light substances.
87. R. Luthy, 2, Thavies-inn—Imp. in hydrostatic presses.
90. F. Fenton, Mappleton, Derbyshire—Imp. in the manufacture of pulp for paper making and similar purposes.
91. E. Powers, Manchester, and J. G. Dale, Warrington—Imp. in the manufacture of caustic soda and potash, and carbonates, chromates and stannates of the same alkalis.
- Dated 12th January, 1863.*
93. E. D. Chattaway, 1, New Broad-street—Imp. in railway signals.
97. W. Clark, 53, Chancery-lane—Imp. in the preparation of green colouring matter. (A com.)
99. W. E. Newton, 66, Chancery-lane—Imp. in the application of power designed for stationary and traction engines, propellers, and other machinery. (A com.)
- Dated 13th January, 1863.*
101. J. B. Fenby, Worcester—A new or improved instrument or apparatus to be attached to organs, pianofortes, and other similar keyed musical instruments for printing the score of any music performed on the said instruments.
103. D. Tannahill and J. Tannahill, Glasgow—Imp. in rivet making machinery.
105. J. T. Stroud, Birmingham—Certain imp. in fixed and portable lights for domestic and other uses, applicable for burning gas and the mineral oils or spirits now so commonly used.
107. R. A. Brooman, 166, Fleet street—Imp. in machinery for lifting bobbins off spindles in spinning machines, and in lubricating spindles. (A com.)
108. W. Southwood, Birmingham—Imp. in machinery for manufacturing nails and brads.
109. M. Tildesley, Willenhall, Staffordshire—Imp. in the manufacture of padlocks, and other locks and their keys.
111. L. Lescuyer, 2, Carrefour de l'Observatoire, Paris—Imp. in india-rubber overshoes or goloshes.
113. J. B. Rock, Pilton, near Barnstaple—Imp. in apparatus for saving life and property from fire and other danger in buildings and mines.
- Dated 14th January, 1863.*
115. J. Kidd, Cannon-row, Westminster—Imp. in apparatus for measuring the quantity of gas supplied to single burners, and increasing its illuminating power.
117. J. A. Schlumberger, Bale, Switzerland—An improved process for manufacturing colours for dyeing and printing. (A com.)
121. B. Burrows, Leicester—Imp. in looms used in weaving narrow fabrics.
123. E. Morewood, Stratford, Essex—Imp. in the manufacture of coated metallic sheets or plates and pieces, and in apparatus to be used therein.
125. T. Wilkinson, Scarborough, Yorkshire—Imp. in the manufacture of tubular steam boilers.
126. W. Johnson, 166, Buchanan-street, Glasgow—Imp. in the manufacture of chlorine and bleaching powder, carbonate of soda, and soda ash and sulphate of iron. (A com.)
- Dated 15th January, 1863.*
120. E. Howes, Birmingham—Imp. in railway, ship, and other lamps.
133. G. Graham, Dalquhoun Turkey-red Dye Works, and J. McLeod, Renton, Dumbarton, N.B.—Imp. in apparatus to be used in Turkey-red dyeing.
135. L. P. Josse, Paris—An improved apparatus for cleansing wheat or other grain or seeds.

139. J. W. Child, Halifax—Imp. in means or apparatus employed in spinning and weaving.
141. W. E. Newton, 66, Chancery-lane—Imp. in microscopes. (A com.)
142. D. F. Leblanc, 3, Percy-street, Bedford-square—An improved level indicator or liquid gauge. (A com.)
143. R. A. Brooman, 166, Fleet-street—Imp. in looms or machinery for the manufacture of lace and other fabrics. (A com.)
- Dated 16th January, 1863.*
145. L. Verdure, Tournai, Belgium—Improved slubs or rovings (in flax, hemp, and other filamentous materials), produced by the slubbing frame, and destined for fine spinning, as also for improved apparatus employed therein.
147. M. Moeglan, Cernay, France—Machinery for printing several colours in succession on the same surface.
148. E. Loysel, Cannon-street—Improved apparatus for preserving valuable property, documents, and letters in cases of shipwreck.
- Dated 17th January, 1863.*
149. W. Shorrocks, Tockholes, near Blackburn—Certain imp. in power looms for weaving.
151. J. Lightfoot, Accrington, Lancashire—Imp. in printing and dyeing textile fabrics and yarns.
152. I. Asche, Birkenhead—Imp. in apparatus for preventing sea-sickness.
153. J. Combe, Leeds—Imp. in machinery for spreading, drawing, and carding flax and other fibrous substances.
154. G. Hayercraft, 23, Lombard-street—Imp. in powder flasks.
- Dated 19th January, 1863.*
157. E. Sabel, Moorgate-street—Imp. in the manufacture of artificial stone. (A com.)
159. J. Laurie, Manchester—Imp. in apparatus for churning milk and mixing liquid compounds.
160. Sir W. O. Brooke, 107, Avenue des Champs Elysees, Paris—Imp. in the manufacture of insulators for electric telegraphs.

PATENTS SEALED.

[From Gazette, January 30th, 1863.]

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| <i>January 28th.</i> | 2398. J. Davis. |
| 2173. C. Bedells. | 2425. J. Mosheimer. |
| 2181. G. A. Biddell. | 2457. W. E. Newton. |
| 2182. J. C. Onions. | 2551. W. E. Newton. |
| 2183. R. Nurse and D. Nurse, jun. | 2638. R. Griffiths. |
| 2184. J. E. Marsh. | 2981. J. Place. |
| 2185. C. H. M'Levins and H. Rider. | <i>January 30th.</i> |
| 2187. T. G. Webb. | 2194. A. Denny and E. M. Denny. |
| 2188. T. Onion. | 2198. J. Townsend. |
| 2190. J. Gray. | 2221. F. M. Jennings. |
| 2197. J. Higgin. | 2283. G. Welch. |
| 2202. A. Priestley. | 2579. F. L. Forestier. |
| 2218. R. W. Ralph. | 2904. C. S. Duncan. |
| 2232. J. J. H. Gebhardt. | 3250. J. Grant. |
| 2304. J. Carter and J. Maher. | |

[From Gazette, February 3rd, 1863.]

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| <i>February 3rd.</i> | 2275. L. D. Verstraet and E. M. Olivier. |
| 2199. W. Clark. | 2317. J. Briere. |
| 2203. W. W. Burton. | 2324. W. J. Hoyle and J. Proven |
| 2206. W. G. Valentin. | 2347. R. Harrington. |
| 2208. J. H. Johnson. | 2360. W. E. Newton. |
| 2212. F. H. M. C. D. de Fenis de Lacombe. | 2365. G. Davies. |
| 2214. R. A. Brooman. | 2371. G. Davies. |
| 2215. R. A. Brooman. | 2491. G. Ritchie. |
| 2219. E. Hall. | 2559. W. Todd and J. Todd. |
| 2226. E. Humphrys. | 2609. W. Upfill and W. Asbury. |
| 2227. J. Tatham. | 2978. J. McKean and T. Greenall. |
| 2236. G. T. Bousfield. | 3247. A. F. Eden. |
| 2247. J. Combe and J. H. Smalpage. | 3331. C. Hancock and S. W. Silver. |
| 2251. W. Macnab. | 3337. J. Brown. |

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

[From Gazette, February 3rd, 1863.]

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| <i>January 26th.</i> | <i>January 30th.</i> |
| 208. R. Sykes and J. Sykes. | 242. G. A. Cator. |
| <i>January 27th.</i> | 250. W. E. Newton. |
| 206. C. F. Varley. | 284. T. Blackburn and M. Knowles. |
| 223. J. H. Johnson. | 285. R. Adams. |
| 226. J. Jeffreys. | <i>January 31st.</i> |
| 229. E. Langrén. | 274. T. Routledge. |
| 238. E. Brooks and H. Waters. | 232. H. C. Jennings. |
| <i>January 29th.</i> | |
| 266. M. A. F. Mennons. | |

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

[From Gazette, February 3rd, 1863.]

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| <i>January 28th.</i> | 390. E. Deiss. |
| 255. J. Gretton. | |